ISSN (print) 0093-4666 © 2010. Mycotaxon, Ltd. ISSN (online) 2154-8889

MYCOTAXON

DOI: 10.5248/114.259

Volume 114, pp. 259–261 *October–December 2010*

Taxonomic studies of *Dactylella* from Fujian, China

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Abstract —A new species of *Dactylella* was found during a continuing survey of anamorphic fungi in tropical areas of Fujian province, China. The new species, *Dactylella yoaniae* was found on *Yoania japonica*. It is described, illustrated and compared with closely related taxa.

Key words — hyphomycetes, taxonomy

Introduction

The genus *Dactylella* was established by Grove (1884) with *D. minuta* Grove as the type species. *Dactylella* is characterized as "Saprophytic. Vegetative hyphae creeping, sparse. Conidiophores erect, simple, septate or non-septate, smooth, hyaline. Conidia born singly at the apex of conidiophore, ellipsoidal or fusoid or cylindrical, one-celled at first, later 2- to many-septate, hyaline". These characters separate *Dactylella* from several similar genera, viz. *Arthrobotrys* Corda, *Dactylaria* Sacc., *Monacrosporium* Oudem, *Brachyphoris* Juan Chen et al, *Drechsleromyces* Subram., *Monacrosporiella* Subram., *Gangliophragma* Subram., and *Lactydina* Subram. (Subramanian 1963, 1977; Chen et al. 2007a).

Dactylella is extremely heterogeneous, and many species are predatory on microanimals. Some are oospore or nematode-egg parasites while others are saprobic on deciduous stems or wood (Chen et al. 2007b). Worldwide, more than 100 species have been validly described, of which 28 species have been described from China.

Fungi were collected on dead branches or rotten wood from tropical forest in Fujian province of China during 2009. Among the collections an undescribed species of *Dactylella* was found. The type specimen is deposited in HSAUP (Herbarium of the Department of Plant Pathology, Shandong Agricultural University) with isotype in HMAS (Mycological Herbarium, Institute of Microbiology, Chinese Academy of Sciences).

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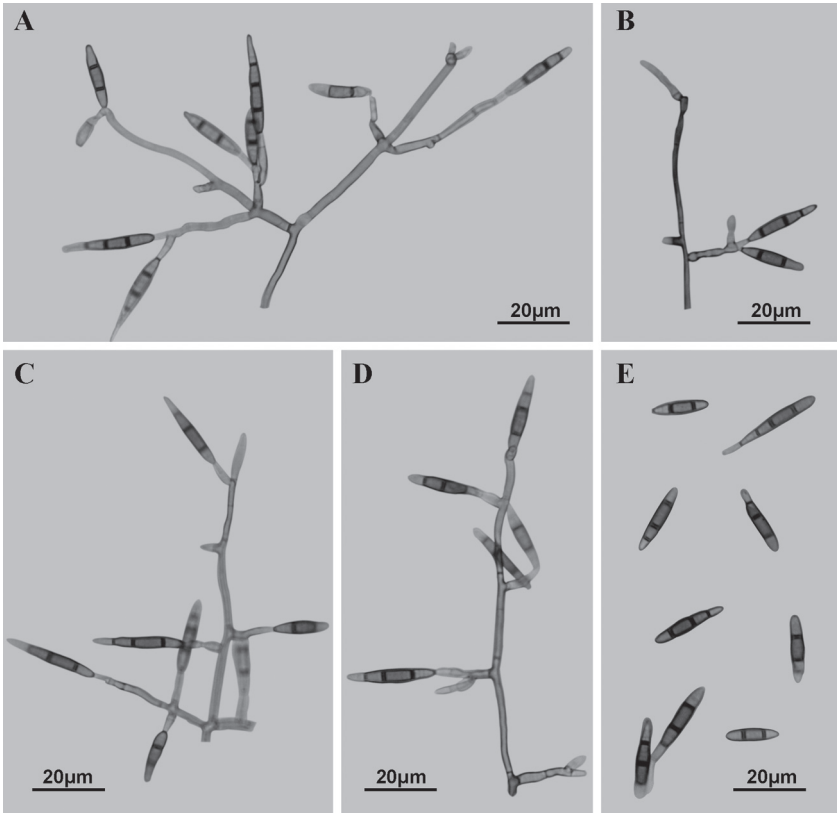

Fig. 1. *Dactylella yoaniae*. A–D. Conidiophores with conidia. E. Conidia.

Taxonomic description

Dactylella yoaniae Y.D. Zhang & X.G. Zhang, **sp. nov.** Figure 1

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Coloniae in substrato naturali effusae, pallide brunneae. Mycelium hyalinis, hyphae ramosae, pallide brunneae, septata, 3–4 μm crassis compositum. Conidiophora ex apice lateribusque hypharum oriunda, erecta, simplicia vel ramificata, incolorata, 1–4-septata, 11–77 μm longa, 3–4 μm lata ad basim, 2–3 μm lata ad apice. Conidia singula in apice conidiophori oriunda, fusiformis vel clavata, basi truncata, holoblastica, pallide brunneae, terminales, laevia, 2–4-septata, praecipue 3 septata, 18–34 × 3–5.5 μm.

Holotype: on dead branches of *Yoania japonica* Maxim. (*Orchidaceae*), Longjingshan, Fujian Province, China. Aug. 11. 2009, Y.D. Zhang, HSAUP H3153 (isotype HMAS 144867).

Etymology: in reference to the host genus, *Yoania*.

Colonies on the natural substratum, effuse, pale brown. Mycelium hyaline, hyphae flexuous and composed of branched, pale brown, septate, 3–4 µm thick. Conidiophores terminally and laterally on the hyphae, erect, simple or with several branches, colourless, 1–4-septate, 11–77 µm tall, 3–4 µm wide at the base, gradually tapering upward to 2–3 µm at the tip. Conidia formed singly at the apex of the conidiophores and on short branches, fusiform to clavate, truncate at the base, holoblastic, pale brown, smooth-walled, 2–4-septate, mainly 3 septate, 18–34 × 3–5.5 µm, median cells brown, the basal and apical cell becoming gradually paler.

The fungus is placed in the genus *Dactylella* based on its conidial shape and the multiseptate, single conidia. The conidia of *D. yoaniae* resemble those of *D. arnaudii* (Yadav 1960), *D. heptameres* (Drechsler 1943), and *D. clavata* (Gao et al. 1995) in having a similar conidial shape and conidiophore branches. However, the conidia of *D. yoaniae* are smaller than those of *D. arnaudii* (54–(69)–88 × 4.5–(7)–10 µm) and *D. heptameres* [(33–42)–55 × 7.5–(8.5)–9 µm)]. In *D. heptameres* the conidia are 3–6-septate (mainly 6-septate) compared to the 2–4-septate (mainly 3-septate) conidia of *D. yoaniae*. *Dactylella clavata* has broader (4–(6)–8 µm) conidia, mainly 3–5-septate. In addition, in *D. yoaniae* the conidial basal and apical cells gradually become paler, which differs from other three species.

Acknowledgments

The authors are grateful to Dr. N.R. O'Neill and Dr. W.B. Kendrick for serving as pre-submission reviewers and for their valuable comments and suggestions. This project was supported by the National Natural Science Foundation of China (No. 30770015, 30499340, 2006FY120100).

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